

**OPTICAL MATERIALS WITH SELECTED INDEX-OF-REFRACTION**

Abstract of the Disclosure

Photosensitive optical materials are used for establishing more versatile approaches  
5 for optical device formation. In some embodiments, unpatterned light is used to shift the  
index-of-refraction of planar optical structures to shift the index-of-refraction of the  
photosensitive material to a desired value. This approach can be effective to produce cladding  
material with a selected index-of-refraction. In additional embodiments gradients in index-of-  
refraction are formed using photosensitive materials. In further embodiments, the  
10 photosensitive materials are patterned within the planar optical structure. Irradiation of the  
photosensitive material can selectively shift the index-of-refraction of the patterned  
photosensitive material. By patterning the light used to irradiate the patterned photosensitive  
material, different optical devices can be selectively activated within the optical structure.